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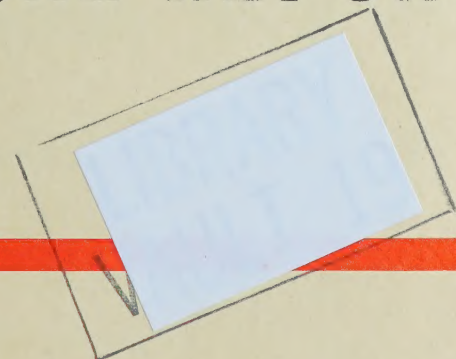


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# ENVIRONMENT CONSERVATION AUTHORITY

## FIRST ANNUAL REPORT



1971





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# ENVIRONMENT CONSERVATION AUTHORITY

## FIRST ANNUAL REPORT

NOVEMBER 1970 - NOVEMBER 1971

9912 - 107th STREET  
EDMONTON, ALBERTA





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## LETTER of TRANSMITTAL

Lieutenant Governor in Council,  
Legislative Building,  
Edmonton, Alberta.

Sir:

I have the honour to transmit herewith the Annual Report of the Environment Conservation Authority as required by Section 7(1)(j) of the Environment Conservation Act (Ch. 125, R.S.A. 1970).

I have the honour to be, Sir,  
Your obedient servant,

W.R. TROST  
Chairman  
Environment Conservation Authority.

## ACKNOWLEDGEMENTS

The Authority wishes to acknowledge concerns of government and of citizens in both the private and the public sector who realised the need for a vehicle to facilitate public participation in formulation of policy in matters relating to the environment.

The support and co-operation received from individuals, organizations, universities, public advisory committees, industry, labour, agriculture and the general public are appreciated. The interaction of these sectors of society has contributed in a meaningful way to this publication.

The Authority is grateful to the members of the public service in all levels of government who so generously volunteered their expertise in many of the complex undertakings.

Special thanks are extended to those who actively participated in presenting their concerns and ideas either through public hearings, public advisory committees, or directly to the Authority. These presentations have assisted in providing a necessary balance among the points of view presented on subjects which have come under discussion.

Finally, the loyalty and dedication of the Authority staff is acknowledged. They have responded in a helpful and enthusiastic manner to the varied tasks assigned to them.





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## INTRODUCTION



## INTRODUCTION

The Environment Conservation Act was passed in 1970, creating the Environment Conservation Authority as a Crown Corporation, charged with responsibilities for environmental matters. The Authority is unique, in that it was without direct precedent, either within or outside Alberta at the time it was established. Because the legislation under which it operates is broadly framed, the Authority was faced with the twin tasks of establishing its own identity and carrying out its responsibilities. In this first report, these two tasks are considered separately.

Part I, entitled "Function, Role and Recommendations" attempts to describe the role and functions of the Authority as a vehicle for public participation in environmental matters. As well, a general indication is presented concerning the environmental posture which might be suitable for Alberta at this time. General recommendations complete Part I.

In Part II, entitled "Activities", the Authority reports on its work during the year, including the activities of its Public Advisory Committees and the public hearings it has held. As a result of many formal and informal meetings with individuals, groups, and associations, the Authority sometimes was able to offer advice or recommendations.

# PART I







ROLE AND FUNCTIONS  
OF THE  
ENVIRONMENT CONSERVATION AUTHORITY



The Environment Conservation Act was passed in 1970 and amended in 1971. It established the Environment Conservation Authority as a Crown Corporation of the Province of Alberta, to consist of three members named by the Lieutenant Governor-in-Council.

The Chairman was appointed on October 1, 1970, and the remaining two members on January 1, 1971, on which date the Authority came formally into existence. This is the first annual report of the Authority, and covers its activities to November 30, 1971.

### 1.1 THE ENVIRONMENT CONSERVATION ACT

The role and function of the Environment Conservation Authority as well as a definition of what environment conservation is held to mean are contained within the Act. It is thought that in this first annual report of the Authority, some considerable attention should be given to the directives and definitions in the Act.<sup>1</sup>

<sup>1</sup> *An office compilation of the Environment Conservation Act, being Chapter 36 of the Statutes of Alberta, 1970, with amendments up to April 1, 1971, together with pertinent sections of other Acts referring to the Environment Conservation Authority, is attached in Appendix 1.*



#### 1.1.1. ENVIRONMENT CONSERVATION

The Act defines matters pertaining to environment conservation to include:

- [a] the conservation, management and utilization of natural resources;
- [b] the prevention and control of pollution of natural resources;
- [c] the control of noise levels resulting from commercial or industrial operations insofar as they affect the environment in the vicinity of those operations;
- [d] economic factors that directly or indirectly affect the ability of persons to carry out measures that relate to the matters referred to in clauses (a), (b) and (c);
- [e] any operations or activities, whether carried on for commercial or industrial purposes or otherwise,
  - (i) that adversely affect or are likely to adversely affect the quality or quantity of any natural resource, or
  - (ii) that destroy, disturb, pollute, alter or make use of a natural resource or are likely to do so;
- [f] the preservation of natural resources for their aesthetic value;
- [g] laws in force in Alberta that relate to or directly or indirectly affect natural resources.

#### 1.1.2 FUNCTIONS OF THE AUTHORITY

In the words of The Environment Conservation Act the Authority

- [a] shall conduct a continuing review of policies and programs of the Government and government agencies on matters pertaining to environment conservation and shall report thereon to the Lieutenant Governor-in-Council;

- [b] may inquire into any matter pertaining to environment conservation and make its recommendations and report thereon to the Lieutenant Governor-in-Council;
- [c] shall, when required to do so by an order of the Lieutenant Governor-in-Council, inquire into any matter pertaining to environment conservation that is specified in the Order and make its recommendations and report thereon to the Lieutenant Governor-in-Council;
- [d] may require any officers or employees of any department of the Government or any government agency to provide information that, in the opinion of the Authority, is necessary for the purposes of enabling it to carry out its responsibilities;
- [e] may, and when required to do so by an order of the Lieutenant Governor-in-Council shall, hold public hearings for the purpose of receiving briefs and submissions on any matter pertaining to environment conservation, and shall report thereon to the Lieutenant Governor-in-Council;
- [f] may from time to time as it considers necessary, but at least once a year, hold joint meetings with the public advisory committees;
- [g] may refer any matter pertaining to environment conservation to the Department of the Environment for its recommendations and report thereon;
- [h] may engage the services of persons having special technical or other knowledge in connection with an inquiry of any matter pertaining to environment conservation that the Authority has undertaken or proposes to undertake;
- [i] in cooperation with and primarily through the medium of the Department of the Environment shall use its best efforts to achieve coordination of policies, programs and administrative procedures of the Govern-

ment and government agencies relating to matters pertaining to environment conservation;

[j] shall make a report in each year to the Lieutenant Governor-in-Council

- (i) summarizing generally its activities and affairs in the preceding year,
- (ii) summarizing the recommendations made by it to the Lieutenant Governor-in-Council and to the Department of the Environment the preceding year, and
- (iii) showing any reports or studies prepared in the preceding year at the request of the Lieutenant Governor-in-Council.

#### 1.1.3 FUNCTIONS OF THE ENVIRONMENT CONSERVATION AUTHORITY IN OTHER ENVIRONMENTAL LEGISLATION

In addition to its functions under The Environment Conservation Act, the Environment Conservation Authority also has some duties ascribed to it in other Acts. When a stop order is issued under The Clean Air Act, The Clean Water Act, or The Department of the Environment Act, these Acts state that "where an appeal is made.....the Minister shall refer the appeal and the stop order to the Authority for an inquiry.

The Authority shall

- [a] hold a hearing to inquire into all matters leading to the making of the stop order, and
- [b] determine whether, in its opinion, there were sufficient grounds for making of the stop order,

and upon completion of the inquiry the Authority shall report its findings to the Minister together with any recommendations it wishes to make in regard to the confirmation, amendment or revocation of the stop order.

Upon receipt of the report of the Authority, the Minister shall either confirm, amend or revoke the stop order and shall notify accordingly the person to whom it is directed."

Reference is also made to the Environment Conservation Authority in The Wilderness Areas Act. Under the terms of that Act, the Environment Conservation Authority when requested by the Lieutenant Governor-in-Council shall hold public hearings for the purpose of receiving and hearing submissions and representations respecting recommendations made by the Advisory Committee on Wilderness Areas, or any proposal made by the Executive Council for the establishment of a new wilderness area or the addition of any lands to, or the withdrawal of any lands from, an existing wilderness area, or any other matters pertaining to the administration and management of wilderness areas.

## 1.2 THE ROLE OF THE ENVIRONMENT CONSERVATION AUTHORITY

As set out in legislation, the Environment Conservation Authority has functions that put it into relationship with the public at large, with the departments and agencies of government, and with the Lieutenant Governor-in-Council. It is to relate to these three sectors in respect of environment conservation, which is defined in the Act to include such broad areas as resource management, conservation and pollution.

The intention of the Act is that, in carrying out its functions, the Authority be a non-partisan body without vested interests, at one length removed from government itself. To confirm its independence, the Authority was established as a Crown Corporation, receiving its appropriation directly from the Executive Council. To confirm its disinterest, the Authority has none of the regulatory, administrative or other routine responsibilities of a department of government, nor is it part of any department.

To summarize, the Authority is, according to the Act, (1) to conduct a continuing review of policies and programs of the Government and government agencies on environmental matters, (2) primarily through the Department of the Environment, assist in co-ordinating policies and programs related to the environment within the departments and agencies

of government, and (3) undertake specific inquiries and public hearings at the request of the Cabinet and report thereon to the Lieutenant Governor-in-Council. As well, the Authority may, on its own initiative, or upon representations from the public, inquire into any matter pertaining to environment conservation, and receive appeals and petitions from individuals, industries or groups.

#### 1.2.1 RELATIONSHIP TO THE PUBLIC

In its original concept, the element of public access was a vital component of the Authority's functions. Evolution and experience have confirmed and strengthened the importance of the Public connection if the Authority is to fulfill its intended role. The connection functions both ways. The Authority wishes to have access to all sectors in the public at large, and has devised and is devising mechanisms to bring this about. It also wishes to make available and facilitate the access the public has, either as individuals, or as groups or associations, to the Authority and to the resources of fact, personnel and information the Authority can provide. The philosophy and practice of public participation in environmental affairs is discussed at length later.

#### 1.2.2. RELATIONSHIP TO THE DEPARTMENTS AND AGENCIES OF GOVERNMENT

The role and functions of the Environment Conservation Authority require it to work closely with those departments and agencies of government that have responsibilities for resource development or other matters relating to the environment, as may be seen particularly in (a), (d), (g), (i), of 1.1.2. The relationship with the departments is again a two-way affair. The Authority can, subject to the approval of the appropriate Deputy Minister, use the officers of the departments as resource personnel to itself and to its advisory committees, in this way obtaining technical reports and factual information as inputs to its deliberations as in 1.1.2 (d). In its turn, the Authority may be advised by the departments and



agencies as to questions and issues that need clarification through the inquiries and public hearings the Authority may undertake.

Though the Authority and the departments may frequently work together, it may be worth repeating that their roles are essentially different. The Authority attempts to develop and maintain an over-view of environmental affairs, stressing the medium and long-term points of view, though urgent short term problems are also included. The departments manage affairs on a day-to-day basis, enforce regulations and administer legislation and carry out the policies of government.

### 1.2.3. REPORTS OF THE AUTHORITY

As set out in the Act, the Authority is to make its recommendations and reports to the Lieutenant Governor-in-Council. When the annual report of the Authority is received by the Lieutenant Governor-in-Council, "the President of the Executive Council shall lay a copy of it before the Legislative Assembly if it is then in session and if not, within 15 days after the commencement of the first session in the next ensuing year." The report then becomes a public document.

On October 29, 1971, the Premier requested the Authority to report directly to the Minister of the Environment as the Minister responsible for the operations of the Authority. The Authority remains a Crown Corporation for administrative purposes within the Department of the Executive Council.

## 1.3 SUMMARY OF ROLES AND FUNCTIONS

In a general way, the Authority is organized to receive inputs from Government agencies and from the public at large. On matters relating to environment conservation, the outputs of the Authority are public reports and recommendations to the Cabinet.

It is important to emphasize that the Authority is not itself a regulatory body, although it has strong concerns with legislation and regulations in its responsibility for a continuing review of Government

policies and programs. Major activities of the Authority will accent functions such as public hearings, public inquiries and petitions from the public. In this sense the Authority is quasi-judicial, appellate, advisory.

In summary, the Authority may be seen as a device through which public interests are blended with environmental, regulatory and legislative expertise, both within and outside government, in order that balanced recommendations can be made to the Cabinet.



THE PHILOSOPHY AND PRACTICE  
OF PUBLIC PARTICIPATION



An important emphasis in the Environment Conservation Act is on public participation in the formulation of policies related to natural resources and environmental management. The concept of public involvement in decisions of Government has evolved steadily over many centuries in democratic societies.

The democratic process is, however, neither simple nor unchanging. With increases in populations and a more structured society, the role of the individual has often been suppressed and that of groups has become enhanced. Public aspirations are often reflections of abstract goals such as freedom, justice and quality of life, but they do not identify functional guidelines for policy formation and implementation of programs.

Changes in public attitudes have created a strong public demand for a larger share in policy formulation. What is needed, therefore, are mechanisms which enable the preferences of the public at large to be identified in terms of the obvious need to channel public energy into policy formulation. This can be assisted by making available to the public as much information as possible on the subject of concern, as well as by inviting a comprehensive and wide-ranging public response, based on that information. Structures and mechanisms need to be established to provide the essential link between public aspirations, policy formulation and program implementation.

It seems probable that at least the Western world has now gone through the first phase of one of the changes in respect of man's relationship to the environment that public participation can bring about. Largely through the activities of individuals and associations of individuals who were deeply concerned with the environmental implications of man's way of life, and after much dialogue and controversy, perhaps a majority has come to favor an attitude of environmental concern.



The first phase may have been easy. A relatively small fraction of society was able to win broad support for a general thesis. In the next phase, sensible and practical attempts will be needed to define the new objectives and to reach them. The need and role for public participation therefore will become both more acute, required from a larger percentage of the population, and be on a more formal base.

## 2.1 GUIDELINES FOR PUBLIC PARTICIPATION

Individuals participate in many ways in determining their future and in safeguarding the rights and interests of generations yet to come. Many people now agree that it has become more important that all individuals participate towards winning and maintaining a successful position for human society within its environment.

For public participation to be meaningful in the formulation of public policies in a democratic society, the following guidelines are suggested.

- (1) Practical means should be made available whereby individuals, groups, associations, companies and corporations can fully and freely develop and publicly express their points of view.
- (2) To the extent that it is possible, the public should be given the opportunity to express its point of view on the basis of up-to-date and correct factual information.
- (3) When public opinion is divided about policy issues, means should be provided to facilitate the exchange of views between opposing parties on both a public and a private and a formal and informal basis, with provision made for the input of objective data and information.
- (4) The principle of public accessibility to the Government should apply. That is to say, for public participation to complete itself, the views that have been developed within the public area should be given access in a public way to elected representatives and the Ministers of the Crown.

- (5) Any instrument or device used to bring about public participation should itself be generally nonpartisan, without vested interests in the issues under discussion, and at arm's length from Government itself. The Authority takes itself to be such an instrument.

## 2.2 SOME TECHNIQUES IN PUBLIC PARTICIPATION

The philosophy of open government is one thing. The problem of how to bring public participation about in a reasonably affective way in particular circumstances is quite another.

The Authority has been given responsibility to encourage public participation in matters relating to environment conservation. Towards this end the Authority encourages informal and unstructured contacts but also establishes formal procedures. These include (a) public advisory committees, (b) science advisory committees, (c) public hearings, and (d) public opinion sampling techniques.

### 2.2.1 PUBLIC ADVISORY COMMITTEES

The Authority is empowered to appoint one or more public advisory committees on environment conservation and prescribe the duties and functions of such public advisory committees. The objectives of such a committee may be long term and continuing, specific and finite, or set up for a special purpose. In its first year, the Authority has appointed three committees, one in each category. They are the Public Advisory Committee on the Environment, the Public Advisory Committee on the Conservation of Archaeological and Historical Resources, the Public Advisory Committee on Environmental Education. In addition, a Public Advisory Committee on the Environmental Sciences acts in a special way to provide scientific advice to the Authority on environmental matters.

#### 2.2.1.1 The Public Advisory Committee On The Environment

The Public Advisory Committee on the Environment is deemed to be the principle instrument developed by the Authority to bring about participation from the public in a continuing way through the Authority on matters of policy, in the determination of environmental objectives and in respect of specific environmental problems that affect the public interest.

In setting up the Public Advisory Committee on the Environment, the Authority took the view that membership on it should be broadly representative of all sectors of the public, and that appointment to it should be by nomination from public organizations, groups, and institutions, rather than through selection by the Authority itself. Accordingly, membership in the Committee was sought through nominations from each of sixty-five organizations, institutions, and groups, representing several hundred thousand citizens. Representation from additional organizations may be sought as time passes.

The Public Advisory Committee on the Environment is meant to have considerable autonomy. It establishes its own system of sub-committees and working groups and elects its own officers, and meets jointly with the Authority at least once a year. A Coordinating Committee, comprised of the Chairman of the Sub-Committee, and Working Groups, acts to coordinate the overall work of the Committee, and meets with the Authority as need arises. The annual reports and recommendations of the Public Advisory Committee on the Environment, which is their formal advice to the Authority, are public documents.

#### 2.2.1.2 The Public Advisory Committee On The Conservation Of Archaeological and Historical Resources

After representation from the Canadian Archaeological Association

and at the suggestion of the Premier of Alberta and of the Minister of Culture, Youth and Recreation, the Environment Conservation Authority agreed to establish a Public Advisory Committee on the Conservation of Archaeological and Historical Resources. Its task was to investigate the need for and make recommendations regarding appropriate legislation and administrative mechanisms for assuring adequate protection to historical and archaeological resources in Alberta. The work of this Committee is reported on in Part B and is cited here as an example of a public advisory committee used to reach a specific objective in a finite time. The initial impetus for its formation arose directly from the public sector, and it will be disbanded when its task is completed.

#### 2.2.1.3 The Public Advisory Committee On Environmental Education

The proposal is widely held that environmental education must play a fundamental role if society is to establish an enlightened human eco-system on earth. This view has been presented to the Authority many times in many forms by groups and individuals. It is a view also firmly held by the Authority. The question remains as to what environmental educational may be, and how the techniques of education may best be used.

After discussions with the Cabinet, and with the Council of Directors of the Department of Education, and with many public groups, the Authority became of the view that priority placed upon education would appropriately be met by setting up a Public Advisory Committee on Environmental Education.

It is envisaged that the Committee on Environmental Education, beginning initially with eight members, will expand its membership and its activities so that suitable attention can be given

to all age groups and educational levels in which improved environmental understanding and technical training might be helpful. The objectives of this Committee therefore are rather broad and may become even more comprehensive in the short-run, although it is conceivable if not probable that it will achieve its mission in a limited period of time and then either dissolve itself or perhaps become a subcommittee of the Public Advisory Committee on the Environment. In the meantime, joint meetings of the two committees are held as need arises.

This Committee can be cited as one with both a very broad and highly specialized term of reference, brought into being by both broad and special pressures from the public.

#### 2.2.1.4 The Public Advisory Committee on the Environmental Sciences

A somewhat different opportunity for public participation is made available through the Public Advisory Committee on the Environmental Sciences. It differs in that its membership is drawn from those members of the public who are highly trained and have a special recognized expertise in some discipline touching on the environment. Science is therefore used in its broad sense, to include the social sciences like economics, law, and sociology, as well as the pure and applied disciplines in the biological and physical sciences. Membership has initially been drawn from the three Universities and from the Research Council of Alberta and from industry.

The Authority has been immensely pleased with the enthusiasm and the interest the scientists have shown in the problems of the environment, and their willingness to give of their time on a voluntary basis to the work of the Committee. The Authority believes that the contribution that the Science Advisory Committee can make to the process of public participation is substantial and has a distinctive flavour and purpose.

Many problems relating to the environment have specialized and difficult scientific and technical components. For a proper presentation to the public as a whole, the Authority believes it might be helpful if such problems are first analyzed by the experts in interdisciplinary conclave. Hopefully, a clarification of the scientific and technical problems will enable subsequent public discussion on the main issues to be more fully developed. The Science Advisory Committee will tend to be used as a spearhead to formulate problems that now seem of longer range, helping to define them so that informed public discussion can ensue as time passes. It is understood that the contributions of the Science Advisory Committee need not necessarily be limited to long range matters, for difficult scientific, economic and technical problems are also to be found in immediate short-term problems that involve the public.

### 2.2.2 PUBLIC HEARINGS

Public hearings may have had as long a history within democracies as have had committees and councils, and now take many forms. Hearings can be informal inquiries at which individuals or representatives of groups can make such representations as they wish in written or oral form on any subject. At the other extreme, hearings can be very formal and approach closely the procedures and even the atmosphere of a court room with legal counsel and with organized questioning and cross examination under close rules of procedure. The Environment Conservation Authority will conduct public hearings of more than one kind, depending upon the task or the objective that has been set.

The Authority must hold public hearings when requested to do so by the Lieutenant Governor-in-Council. These can be short-term and urgent, particularly if associated with legislation that is pending. They can be long-term and continuing if associated with the definition of long-term goals and objectives. The Authority is also required to hold public hearings on appeals to stop orders issued by the Minister of the Environment.



It is now permissive for the Authority to hold public hearings on petitions from the public, but consideration is being given by the Minister of the Environment to ways in which the public could compel the Authority to hold a public hearing on a particular subject. This would further strengthen the public role.

The Authority has held or, at the request of the Minister is arranging to hold, public hearings on the following subjects:

- [1] The Restoration of the Levels of the Lakes in the Cooking Lake Moraine Watershed Area.
- [2] Impact on the Environment of Surface Mining for Coal.
- [3] Conservation of Archaeological and Historical Resources.
- [4] The Environmental Effects of Pollution from Sulphur Extraction Gas Plants.
- [5] Land Use and Development Within the Canmore Corridor.
- [6] Impact on the Environment of Forest Utilization.
- [7] Reclamation and Development of the Crows Nest Area.
- [8] Regulated Development Within the Strathcona Industrial Corridor.
- [9] The Environmental Effects of the Use of Insecticides, Pesticides and Hard Chemicals.
- [10] Impact on the Environment of Oil and Gas Exploration, Development and Transportation.

To bring about well balanced hearings it is necessary that all relevant points of view be heard, and that all participants have suitable and sufficient access to the facts of the case.

It is also important that the hearings be held in the proper context, and that the proper basis of fact, information and terms of reference for the hearing be made available to the public well in advance of the hearings.

The Authority encourages its Public Advisory Committees and the organizations represented on them to take part in the public hearings. The Authority also invites submissions from all other interested groups and organizations and individuals who are known by the Authority to have an interest in the subject under hearing. The Authority also believes it most important that those citizens and organizations whose livelihoods are affected by the subject of the hearing should be given every opportunity and encouragement to make their case well known. This includes cities and towns, industry, management, labour, the farming community, and so on.

The Authority will report on the hearings in three ways.

- (1) A complete written transcript of the hearings, including copies of the written submissions, will be published as a public document at a nominal cost.
- (2) A concise and objective summary of the hearings will also be published and made available.
- (3) The report containing the recommendations of the Authority to the Minister and to the Lieutenant Governor-in-Council will be prepared as a document for release by the Minister.

Public hearings can be important educational forces in society. To the extent that they achieve a well balanced presentation of the public view, and are factual and well informed, they can also serve as helpful aids to government. Sometimes special efforts may be needed to attain these ends.

### 2.2.3 PUBLIC OPINION SAMPLING TECHNIQUES

Public hearings, and perhaps any public debate that depends on voluntary contributions may not necessarily have all views represented or given proper weight. The Authority therefore considers it useful to use public opinion sampling techniques to measure

the responses of the public on a statistical basis to the issue under discussion. This is particularly useful in subjects that have been exposed to public hearings since it gives an additional background of information as to the response of those persons who did not make representation at the public hearings as well as those who did.

Public opinion sampling techniques sometimes bring out attitudes in the public that are relevant, significant, and bear on the question, but not previously expressed. The limitations of public opinion sampling methods must always be borne in mind. Perhaps the simplest limitation is that the view and judgement of the public changes as time passes, but the Authority believes that the public opinion sampling techniques may serve in some cases as corroborative or check-point information as against the other ways through which it is seeking to develop a participation from the public at large.



# THE FOUR WAYS FORWARD



It may be that society is just now emerging from a substantial re-evaluation of how it fits as a species into the world as a whole. After a period of confusion, skepticism and sharp controversy as to whether or not man was creating excessive damage to his environment, or even if his future on earth were to be short or long, there are indications that a kind of consensus is emerging. Do not all governments and all political parties now urge the same objective, namely, the maintenance and restoration of an environment best suited to man and other forms of life now and for the future? Indeed, do we not all quite generally agree that there is a need for the development of policies for the management of the environment, taking into account the dynamics of life, the requirements of man and the resources available, and that the time has come for a rational approach to these objectives?

If a consensus has been set as to the general objective, what now remains are the mechanics of achieving it, the emphasis that is to be placed on different broad approaches, the identification of priorities, and an assessment of the interdependencies and urgencies associated with the several tasks.

In respect of the broad approaches, the Environment Conservation Authority has the general view that environmental management, environmental education and environmental legislation with a broad and general emphasis on environmental economics, including the economics of living processes, together provide the major avenues into the future.

### 3.1 ENVIRONMENTAL MANAGEMENT

With the great increases in human population, and with the very considerable increases in resource consumption on the average by individuals that the recent past has seen, the total impact of the human species on the biosphere in which it lives has, it is often said, tested the capacity



of the biosphere to absorb the wastes of man. At the same time, some of the ancient knacks man had of conserving his environment have been abandoned or have become impractical for an individual to implement. The great movement of people from the farms to the cities has undoubtedly enlarged the scope and concentrated the impact of environmental problems. In a way, the problem seems simple. Many changes and advances have occurred quickly in society. It may only be necessary now to invent and introduce, or re-introduce, such sound environmental practices as are required to restore equilibrium in an environment that has undergone many substantial, sharp and unexpected changes. The extra new problem, however, seems to be that we must now also manage man.

There are several aspects to such a question.

### 3.1.1. ENVIRONMENTAL TECHNOLOGY

It is probably partly true that environmental problems have been made more acute by the quick inroads a rapidly developing scientific technology enabled us to make into the physical resources of the world. It is hoped that this same ingenuity will help us to invent ways to manage the processes that now support us in such a way as to minimize or eliminate the undesirable side-effects. There are at least two parts to this problem. One has to do with the processes themselves and the other has to do with the people who control the processes. Both of these have strong educational as well as management components. The two together will produce the new environmental technology that will be needed if proper environmental management is to be achieved.

### 3.1.2. NEW ENVIRONMENTAL ENTERPRISES

The addition of an environmental management attitude to the management of industry will certainly produce some changes. Many new businesses will be created. Some of these will be new in kind, developing new technologies or new relationships between people and things. Many will be interdisciplinary, many highly specialized in areas not yet well developed. New

business may be able to gain competitive advantages by introducing new processes that solve environmental problems in a superior way, and old established businesses may have to adapt, add new divisions **and renovate** as time passes.

### 3.1.3. ENVIRONMENTAL PLANNING AND INTEGRATION

Man's relations with man and with the earth's resources are changing at a pace difficult to comprehend. Powerful forces are acting concurrently reshaping the physical and social environments. Problems and pressures arise from changes in technology, new social attitudes, and the growth of population and urbanization. Increased affluence and more leisure foster competing demands for finite resources. The future may well accentuate these trends.

One effect of these changes is to underline the interdependence of subjects that formerly were treated in a self-contained way. Another result is to emphasize the fundamental importance of anticipating the after-effects of present actions on life support processes, a fact vividly emphasized in the river, lake, delta and ocean systems of the world. Environmental management means pre-planning and integration of cause and effect, so that unfortunate consequences on living processes can be avoided.

### 3.1.4. HUMAN ECOLOGY AND ENVIRONMENTAL MANAGEMENT

It is probably true that the human species now dominates the earth and other living species in a way that no other animal has ever done save perhaps the dinosaurs, although plants may also have achieved a total dominance of the earth's surface in their time. The coal measures that underlie us are a present token of that past dominance by botanical species. Naturally our first concern is with our own species and with its future prospects. This is human ecology. We must so consort ourselves through proper environmental management that our own species can be given assurance that its future will be healthy and secure. It is not an unnatural claim to make on one generation that it prepare and keep safe the future for the

next generation and perhaps the generation after that as well. But because man is so overwhelmingly the dominant life species, it may also fall on him without presumption to make provision for the future of living species other than his own. Indeed it may well be that his own survival will be directly linked to such an act, that it will be a selfish act in his own interest, not merely a beneficial one. It is altogether clear how directly man and other animals depend on the plant world. The plants manufacture the oxygen that man and animals must breathe if they are to live. Man also has vital and direct dependencies on other animal species. Consequently, in the statement that ecological considerations are basic to environmental management, the further statement that human ecology tends to include within itself all living processes, may only be a statement of simple human self-interest. It is in this sense, presumably, that one may say that environmental management assumes the maintenance of the human eco-system as its framework and responsibility.

### 3.2 ENVIRONMENTAL ECONOMICS

The economics of environmental management also has two parts to it. One has to do with the past, the other with the present and the future.

The past has undoubtedly left a legacy in the form of environmental damage that has accumulated in the air, the land and the water, as well as in the form of the capital costs of old industrial plants that no longer meet contemporary standards. The cost of this legacy is thought to be substantial throughout the world, but a young mountain-bounded province is freer of them than most. Our concern is more largely with the present and the future.

For the present and the future there are reasons to suspect that in new operations the costs though certainly real may not in percentage terms be overwhelmingly large. In the first place, good environmental management will prevent damages to people and property that are now borne as hidden costs and do not appear as costs in the product itself. Secondly, the environmental management costs borne by industry will no doubt somehow be

passed on to the consumer where they will take their weight in the market place. Thirdly, in many cases it is to be expected that good environmental management will in fact improve returns, as it has in so many cases already, by reducing wastage, by increasing the range and novelty of by-products, by developing superior technology, by improved efficiencies through suitable recycling processes, and so on. Fourthly, and perhaps most importantly for us in Alberta, the requirements of environmental management will create new jobs and open up new employment opportunities for the working force.

It is sometimes estimated that the cost of environmental management may amount to about 5% of the costs of the finished product. Although this may seem a small percentage and is subject to wide variation, in large resource industries like those in our Province it still will finance the introduction of a considerable number of jobs as well as opportunities for an appreciable number of new business ventures to be launched. Moreover, since the cost of environmental management is going up at rather similar rates generally throughout the world, its impact on the market may not be competitively of overriding importance. Indeed, there are some grounds to suspect that the cost of legitimate environmental management, because of population densities, may be fractionally less in Alberta than in the United States, Europe and many of the Pacific Rim countries. Both, therefore, in respect of entrepreneurs who have specific environmental enterprises in mind, and in respect of the general business advantages that environmental management may afford to the Province, it seems not out of place to suggest that thought be given to taking a business advantage out of the opportunities that environment conservation presents in relation to the development of resource industries in the Province and indeed in Canada as a whole.

A disadvantage to resource development in Alberta is the distance to markets and the slow rates at which the environment restores itself. Compared to the tropics we can claim a share of that environmental fragility the Arctic is supposed to have. But we also have advantages. Assume the costs of environmental management to be passed on to the consumer. In respect of resource developments like coal, oil, gas and forest products, the business of environmental management may be done for the most part within Alberta. In a general way then since we export most of these products,

the extra costs may also in the large part be exported. Therefore the economic returns of environmental management could accrue, in the large part, to Alberta whereas their costs may, for the most part, be borne abroad. In brief, the result could be that a larger portion of the resource dollar would be kept at home. Of course markets must be retained.

### 3.3 ENVIRONMENTAL EDUCATION

In the last few years some of the more effective environmental education has been done by the informal educators, by associations that had an environmental orientation, by the anti-pollution groups and environmental activists, by the concerned groups and individuals who took it on themselves to carry the message to the people. We will need both formal and informal educators in the future.

#### 3.3.1 WITHIN THE PUBLIC SCHOOL SYSTEM

The Public Schools could invent programs and curricula to help the young develop an awareness of the environment in contemporary terms, both as it applies to the complex communities and organisms called cities. There is good reason to believe that these programs might produce favourable results at the elementary school level, introduced into the regular curriculum in social studies and in the biological sciences. A further development could be within the regular course of studies at the junior high school and at the senior high school levels with proper attention paid to the effect of the elective system as well as to budget constraints. Both elementary and high schools in the Province are moving forward in these areas in an experimental way, with attention being paid to the possibility of using outdoor centres to assist in environmental programs.

#### 3.3.2 AT THE POST-SECONDARY AND ADVANCED LEVEL

Part of the problem with environmental education is the extent to

which new subjects should be introduced into the existing programs. This problem still remains at the post-secondary level but there does appear more clearly here the need for people trained in new ways and with new skills both in junior colleges, in institutes of technology and in the universities. This would meet the sometimes highly specialized problems that environmental management must solve, and the need for teachers of environmental programs in the school system.

### 3.3.3 CONTINUING EDUCATION

The task of helping the next generation is only part of the responsibility of environmental education, as has been well shown by the active environmental groups in the public area. Adults also need to have an exposure to the new concepts and to have the opportunity for their attitudes to the world that surrounds them changed and altered so that they may behave more appropriately. There is a role for continuing education both under the sponsorship of institutions and outside institutions by voluntary groups so that all sectors of society can be reached.

### 3.3.4 ENVIRONMENTAL EDUCATION WITHIN INDUSTRY AND GOVERNMENT

There is perhaps a specific requirement for what might be called in-house training within industry and within government. Employees could then be given suitable instruction so that the jobs they undertake or may be called upon to undertake can be conducted in an environmentally safe way. It may be that training programs in industry worked out in collaboration with institutes of technology might be a useful way for introducing the new techniques and controls that environmental management constraints may place upon industrial processes.

### 3.3.5 ENVIRONMENTAL SELF-EDUCATION IN GROUPS AND IN SOCIETY

For some time self-education through participation and awareness



in groups and in society may remain as the most direct and effective way of educating individuals. Part of the need here is to improve communications and improve the basis of fact upon which communications occur in these committed and enthusiastic groups.

### 3.4 ENVIRONMENTAL LEGISLATION

Legislation is often looked upon as a formal definition of the relationships that exist between government and those who are governed. Much new environmental legislation has been passed in the last two years. The introduction of quite new legislation, in which new formal definitions constrain the behaviour of citizens in areas where restraints previously had not existed, carries with it a special significance, particularly in a democracy. On matters of fundamental importance, the first appearance of such new legislation indicates that a new consensus has formed or is forming up in the public mind. The new legislation then indicates that the democratic process is at work, trying to give a satisfactory expression of the new consensus.

Such processes may require much time and public discussion, particularly if matters affecting the livelihood and well being of citizens are involved, and if there are disputes as to how these might be balanced among the several conflicting interests.

An important stage is reached at the point of first consensus, the time when new legislation first appears. The consensus indicates not so much that all inputs have been resolved, but rather because of new circumstances that impinge upon people and that they know of through immediate and personal knowledge, the general view is reached that something must be done. Precisely what should be done is, at this point, still to be determined.

It is perhaps at this point that society is now moving in respect of its relationship to the physical environment. Citizens, associations, businesses, know out of their own experience that certain rationalizations and constraints on their own behaviour and the

behaviour of others as they affect the environment are needed in the best interests of all. But precisely what these restraints should be, how they will affect specific interests and enterprises, who will win and who will lose are, at least partly, still open questions. This is an opportune time for legislation to be introduced.

New legislation in its turn has different testing points, and returns to the public in a democratic society for pragmatic evaluation at each of them. There is first the point where the legislation is formed and passed, then when regulations supporting the legislation are created, and finally, when enforcement procedures are adopted and experienced.

Each of these testing points has its own kind of importance as new environmental legislation is worked into society. The legislation establishes principles, guidelines and objectives; the regulations, the means whereby they are to be attained; and enforcement, the rigor with which they are implemented. Testing is needed at each point to ensure that legislation, regulations and enforcement are practical, meet the public need and are fair to all. Sometimes these are difficult points to establish when dealing with the relationships between man and his environment.

Perhaps a word of caution is not out of place. Though it may be true that a general consensus has been reached that the environment can be endangered for future generations and that we must take steps to remedy that situation, there has hardly yet been time for a consensus to form either as to how critical the situation is, or more precisely, what steps are demanded and what the priorities for action are.

**SUMMARY  
AND  
GENERAL RECOMMENDATIONS**



In its first year of operation the Environment Conservation Authority has had many specific problems associated with the conservation of the environment drawn to its attention. It has also had many discussions with individuals and organizations making representations on particular problems of importance to the Province. There has also been a tendency in these discussions to stress the need for discovering and placing an emphasis upon the more fundamental aspects of environmental problems and to identify the paths society must follow to work its way into a satisfactory future. A continuing emphasis has been placed in all representations made to the Authority, on the need to seek and maintain a balanced view, and to move forward in a thoughtful way that gives proper consideration to the needs of all the citizens now and for future generations.

In this its first Annual Report to the Lieutenant Governor-in-Council the Environment Conservation Authority supports the position that the time is opportune to begin to move on broad fronts to achieve a proper balance in our environment now and for the future. The Authority identifies four major elements that need to be developed and woven together to produce the environmental fabric of a secure future. These are environmental education, environmental economics, environmental management and environmental legislation.

#### 4.1 ENVIRONMENTAL EDUCATION

The re-adaptations that man must make, now that he has so densely occupied the surface of the earth, require education inputs to give him the skills and the new attitudes that these new circumstances demand. Environmental education is required, both within the school system at all levels from elementary to university, and outside the formal educational structures, in industry, in government and in the public at large.

#### 4.2 ENVIRONMENTAL ECONOMICS

Man must both maintain his own livelihood and protect his future. He must maintain a society that functions well and still not imperil his own well-being nor the survival of other living species. Economic analysis of environmental management, including the processes that disturb the environment as well as the disturbances themselves, is an excellent instrument to sharpen up judgment and focus attention on matters of great relevancy. In its essence, environment conservation is an attempt to retain suitable surroundings for living processes, human and non-human, now and for the future. In the economics of living processes, economics and human ecology do not yet combine simply to give easy answers. But that is where the problems are.

#### 4.3 ENVIRONMENTAL MANAGEMENT

The stress man places on his environment when he lives in it has clearly led to the need that the results of present actions must be foreseen and suitable preparations made. In its simplest consequence, this means that environmental management must become another of the responsibilities of management itself. Environmental management must be integrated in a regular way into the overall management of man's activities at home, at work and at play.

#### 4.4 ENVIRONMENTAL LEGISLATION

Environmental legislation includes the legislation itself, the regulations that amplify and define the legislation, and the enforcement procedures that follow. It is important that principles and guidelines that establish the objectives men think wise for themselves be set out as clearly as possible. Since these may deal with most complex situations, and involve individuals and groups at many levels of their life, it is important to retain flexibility and avoid over-regulation

in attempting to achieve these objectives. But the goal must be achieved.

#### 4.5 CONCLUSION

The Environment Conservation Authority recommends that continuing attention be paid to environmental education, environmental economics, environmental management, and environmental legislation, and to the way these four elements must be integrated with each other to produce a favourable future for all.



## PART II





POLICIES AND PROGRAMS  
OF GOVERNMENT RELATING TO  
ENVIRONMENT CONSERVATION



The Authority is required to conduct a continuing review of policies and programs of the Government and government agencies on matters pertaining to environment conservation and report thereon to the Lieutenant Governor-in-Council. The task is particularly complex, in this first year of the Authority's own existence, not only because the Authority must report on its own birth, but also because much new environmental legislation came into being both at the Provincial and at the Federal level, and because a change of Government in Alberta occurred in the middle of the reporting year, with subsequent new policy directions and procedures.

The position of the Authority is made even more complex because there are ten or more new acts relating to environment conservation. Both at the Federal and Provincial level, reorganization has occurred, and there have been transferrals of staff and programs from established sectors of Government into new ones. At the time of writing administrative changes and implementation of legislation are in some cases yet to be completed.

### 1.1 A REVIEW OF RECENT ENVIRONMENTAL LEGISLATION

The Environment Conservation Act, under which the Environment Conservation Authority operates as a Crown Corporation, was passed in 1970 and amended in 1971. The Chairman was appointed on October 1, 1970, and the remaining two members on January 1, 1971. The appointment of the Environment Act was proclaimed on April 1, 1971. Clarification of the role of the Authority has occurred and its relationship to departments of Government have been more clearly defined since September 1, 1971. At the request of the Premier the Authority now reports to the Lieutenant Governor-in-Council through the Minister of the Environment.

The Authority was involved with advising on legislation being prepared for the 1971 session of the Alberta legislature. The Authority supported the basic concepts in the new legislation, which included

the Department of the Environment Act, Wilderness Areas Act, Clean Air Act, Clean Water Act, Beverage Containers Act and the Environmental Research Trust Act.

### 1.1.1 DEPARTMENT OF THE ENVIRONMENT ACT

Recognition by Government of the need to centralize the responsibilities for pollution control and environmental management was implemented by formation of the Department of the Environment. The Minister of the Department of the Environment was assigned responsibility for administration of the Agricultural Chemicals Act and for drafting legislation relevant to reclamation and land conservation, particularly as related to surface disturbances caused by extractive industries.

A significant step was taken toward integration of administration in environmental matters by conferring on the Minister of the Environment powers and duties under the Department of the Environment Act. Specifically the Minister was charged with the responsibility for coordination of policies, programs, services and administrative procedures of all Government departments and agencies in matters pertaining to the environment. In the new Act, a Natural Resources Coordinating Council was created, consisting of eight Deputy Ministers and the Chairman of the Energy Resources Conservation Board. A seventeen member interdepartmental Conservation and Utilization Committee comprised largely of Directors of resources divisions of Government departments provides the mechanism for administrative liaison. Political coordination is ensured by superimposing a five member Cabinet Coordinating Committee as an umbrella over all functions of the Department of the Environment.

### 1.1.2 THE WILDERNESS AREAS ACT

The Wilderness Areas Act was given first reading in the 1970 session. Two stipulations in the Act received considerable public comment. These were (1) restrictions of human activities in wilderness Areas and (2) restriction on size of wilderness areas, which were not to exceed 144 square miles. The intent of the new Act was to create areas where no person could enter, except on foot, nor could any person hunt, fish or trap in a wilderness area.,

Both the limitation on human activity in wilderness areas and their maximum size caused objections. No clear consensus was evident, but the weight of public opinion at and following the public hearings appeared to favor some easing of restrictions, both on activities in wilderness areas and on size of wilderness areas. While there is still public debate on some aspects of the Wilderness Areas Act, general support seems evident for setting aside areas which will remain untrammelled by man.

The Act provides for an Advisory Committee to the Minister of Lands and Forests to recommend boundaries for wilderness areas within specified regions. The Act also specifies that the Authority may be asked by the Lieutenant Governor-in-Council to hold public hearings on such recommendations and on "any other matters pertaining to the administration and management of wilderness areas".

### 1.1.3 THE OIL AND GAS CONSERVATION BOARD AND THE ENERGY RESOURCES CONSERVATION ACT

Rapidly increasing public interest in energy resources, plus the environmental impact of their development was evident in 1970. The Oil and Gas Conservation Board assumed additional responsibilities for environmental protection in 1970, particularly with respect for pollution control necessitated by some of the operations of the oil and gas industry. Roles were clarified, defining the functions and responsibilities of various departments and agencies of Government in the develop-

ment and enforcement of pollution control regulations in the oil and gas industry.

In 1971, the Energy Resources Conservation Act was passed, following which, the Oil and Gas Conservation Board became the Energy Resources Conservation Board, with coal and hydro added to oil and gas as responsibilities of the Board. Appraisal of energy resources, productive capacity of energy resources, appraisal of market potential, prevention of energy resources wastage and allied matters are of overriding importance to the Energy Resources Conservation Board. Pollution control and environment conservation as they relate to the development of energy resources are also elements in its responsibilities.

As described in an earlier section, the Department of the Environment has the role of coordinating Government policies and programs relating to environmental matters. At the time of reporting, not all the implications of the new legislation have been activated. The Department of the Environment and the Energy Resources Conservation Board have many shared interests, in which their respective roles have yet to be clarified. Work is proceeding in this direction, but the final result of new legislation with respect to the energy resources of Alberta cannot be reported at this time.





## PUBLIC ACTIVITIES



## 2.1 RECOMMENDATIONS AND ADVICE PROVIDED BY THE AUTHORITY

During its first year of operation many individuals, groups and associations met with the Authority in public and private meetings to discuss environmental matters of immediate importance to them. These meetings, sometimes accompanied by petitions or the submission of briefs to the Authority, on more than one occasion led to public hearings. In other cases, recommendations from the Authority to departments or agencies of Government or to the Cabinet resulted. These contacts with the public also had an influence on the advice the Authority offered, when requested, on new environmental legislation that was being drafted for the 1971 session. Some examples follow.

### 2.1.1 PARKS AND WILDERNESS AREAS

Many representations were made to the Authority in respect of parks, wilderness areas, wild river preservation, etc. An interesting case arose from representations made by citizens from northwest Alberta.

Following the presentation of a brief entitled "Wild Kakwa", the Authority was invited to a public meeting in Grande Prairie to discuss the establishment of a wilderness area that would include Kakwa Falls and other scenically attractive regions in the mountains and foothills nearby. Good discussions occurred with an estimated attendance of 300 citizens representing many different sectors and points of view in the region. In the discussion it soon became clear that the wish of the meeting was for less restricted public use than that defined in the Wilderness Areas Act, but still for adequate protection of scenic sites and recreational amenities that had been traditionally enjoyed by the people. The advice of the Authority was that the citizens establish a somewhat more formal organization that could then more closely define the public objectives, determine the extent of support the public would provide to these objectives, and make suitable representations to the Government particularly through the Minister of Lands and Forests and

the Minister of the Environment. If a wilderness area did indeed turn out to be the objective of the citizens then an approach to the Public Advisory Committee on Wilderness Areas when it was named, was suggested.

These actions are still going forward.

### 2.1.2 THE WILDERNESS AREAS ACT

The Wilderness Areas Act had been tabled in the 1970 Session with public hearings held on it that summer. The Environment Conservation Authority had been asked by the Government to take an interest in the further development of this legislation when it was presented again for final ratification in the 1971 Session. The Authority gave consideration to the nature and the contents of the many presentations and opinions submitted to it on wilderness areas and recommended that a Public Advisory Committee on Wilderness Areas be named in the legislation, and that the holding of public hearings on the establishment of new wilderness areas be a mechanism stipulated in the Act.

### 2.1.3 ENVIRONMENTAL EDUCATION

The Authority had many discussions with institutional representatives, with groups and individuals in respect of environmental education, both at the post-secondary and at the public school level.

The Authority is seeking further advice on these matters from its Public Advisory Committee on Environmental Education.

#### 2.1.3.1 Environmental Technology

In discussions with members of the staffs of the Mount Royal College and of the Alberta Colleges Commission, the Authority supported the introduction of a two-year program in environmental technology to be introduced in the fall of 1971 at Mount Royal Junior College.

The Authority was of the view that the program proposed by the College was well planned and put together. The two-year Environmental Technology program would essentially be a rearrangement and a specialization within the general areas that two-year science technology programs have come to fill. Enquiries the Authority had made indicated the probability of an increase in the needs for science and environmental technology graduates in government, in industry and in consultancy firms in the future, with a further probability that environmental technologists would be given a preference for certain kinds of positions.

This program is now being offered by Mount Royal College with the approval of the Colleges Commission.

#### 2.1.3.2 Environmental Studies in the Public School System

After discussions with many groups but particularly with members of the staffs of the Calgary Public School Board and of the Edmonton Public School Board and the Edmonton Separate School Board, the Authority discussed with the Cabinet and with senior members of the Department of Education the emphasis that might be placed on environmental education. Following these discussions the Authority recommended that encouragement be given to the introduction of suitable environmental studies programs in the school system, and that the environmental programs be so organized as to become a regular part of the curriculum.

#### 2.1.4 WATER MANAGEMENT

A surprisingly high proportion of the problems addressed by the public through petitions, briefs, submissions to, or general meetings with the Authority touched upon some aspect of water management. Within that general subject a recurring element was a concern with the levels of lakes in the Province, with the quality of water in the lakes

and the rivers, and with the reasons underlying observed changes.

As a result of these many expressions of concern the Authority asked the Natural Resources Coordinating Council of the Government of Alberta to inform it as to the state of knowledge in respect of the many variables affecting surface waters in the Province. The Authority amplified its request by suggesting broad areas in which it felt information would be needed. These included:

- [1] A general review of the stability of the hydrological cycles with particular reference to surface water levels as well as the subsurface water tables.
- [2] A study of the effect of long-term withdrawal of water from the surface systems. This would involve any exchange between surface and deep strata water by artificial means such as water injection for enhanced oil recovery, solution mining, and deep well disposal of noxious waste waters.
- [3] An investigation into the question of whether there is movement between deep strata and subsurface water, and if so, the extent of that movement both horizontally and vertically; if such the possibility of an exchange between the two types of water and the consequences of such an exchange.

The Authority feels it prudent that attention should be directed towards obtaining information on the probable long-range effects of such practices in water use management.

#### 2.1.5 NEW ENVIRONMENTAL ENTERPRISES

Individuals and companies sought advice from the Authority on specific matters which dealt mainly with innovations to prevent environmental degradation. Some of these included: the problem of noise and atmospheric pollution within a manufacturing plant; the development of a water jet device to reduce carbon monoxide emission from internal combustion engines; the reclamation of waste metals by shredding car bodies; the development of natural gas fueled vehicles;

new technology in the development of feedlots; the development of a mechanical device to remove oil spills from water, etc. Inquiries of this nature from the public helped the Authority to understand how new enterprises and new job opportunities were being created by suitable environmental management.

## 2.2 FIELD TRIPS, CONFERENCES, PUBLIC MEETINGS

Throughout the year, Authority members and staff endeavoured to become involved in as many environmental matters as feasible. Requests to the Authority were numerous for appearances at schools, organization meetings and conferences. A substantial number of requests to attend symposia, conventions, etc. came from outside Alberta.

Following the request of the Government to the Authority to conduct public hearings on the impact of resource development on the environment, several field trips were made by Authority members. All major active surface coal mining areas in Alberta were inspected, with the help of mining company officials, as were major operations in British Columbia, Montana, Kentucky and Pennsylvania. Similarly, forest and petroleum operations were visited, in order to gain some appreciation of environmental impact of resource development in those general fields. One tour was made of the proposed Arctic pipeline route.

Frequency of environmental conferences was very high in 1971, in Alberta, across Canada and in the United States. An attempt was made by Authority members and staff, to attend conferences selected for their capacity to develop productive approaches to environmental problems. Of great significance to Alberta was the conference on the Peace-Athabasca Delta, sponsored by the University of Alberta in Edmonton. National Park public hearings by the Government of Canada, Federal-Provincial resource conferences, international wildlife conferences, meetings of Alberta provincial organizations and several resource industry symposia were also attended.



A strong interest was evident in environmental problems in the school system. Pollution, resource utilization and depletion, environmental education and population growth appeared to be the main area of concern for students and teachers alike. A number of classroom discussions were held to discuss these problems, and to familiarize students with the role of the Authority in the general and specific approaches of Government to problems in environmental management.

Field trips, and attendance at conferences and public meetings, together with strong contacts with the school system were of considerable help to the Authority in determining the probable acceptance of principles of environmental management by the public at large. In particular, it was clear that at all levels of the public, whether it be in industry or environmental organizations, in the education system or the public at large, a high expectation existed for involvement in public discussion of resource development, environmental management and environmental education.

### 2.3 PETITIONS, COMPLAINTS AND DIRECT PUBLIC CONTACTS

During the first few months of Authority operation, prior to establishment of the Department of the Environment, there were frequent public complaints and requests from individuals and organizations for assistance in resolving a variety of environmental problems. Generally speaking, complainants were personally involved, or had a strong sense of public involvement, or both.

Of those complaints where direct referral to a Government Department, or advice to the complainant could not resolve the problem, the Authority made personal contact, followed by actual inspection, if this were possible. Over one half of public complaints were associated with pollution, equally divided between water and air pollution. The other fifty percent of public complaints to the Authority were evenly distributed through a variety of general environmental concerns or specific occurrences affecting the complainants. A description follows of three complaints, one a petition, two from individuals,

where remedies were not obvious, or where the Authority provided some assistance. These examples are provided to illustrate the general involvement of the Authority with environmental concerns specifically drawn to its attention. The Authority continues to receive petitions from concerned citizens.

### 2.3.1 WATER POLLUTION

Early in January, 1971 UNIFARM informed the Authority of a potential pollution case of concern to a farm member of UNIFARM. There was anxiety on the farmer's part that a natural drainage on his property might be polluted by effluent from a gas pipeline compressor station. Operators of the compressor station gave assurance that no pollution would occur. The Authority notified the water pollution control section of the Provincial Department of Health (this section is now in the Department of the Environment). A report received by the Authority from the pollution control section indicated that plant operations and procedures were satisfactory for ensuring the protection of surface drainage.

In midsummer, the farmer who had originally complained through UNIFARM contacted the Authority directly. The Authority was informed that an "entire herd of majority Recorded Charolais [cattle] are gradually deteriorating and some are in extreme condition...." as a result of being pastured on land near the compressor station.

Two of the cattle were sent to the Provincial Laboratory facilities in Edmonton for testing. The Energy Resources Conservation Board staff tested water near the station, and the Fish and Wildlife Division of the Department of Lands and Forests conducted bioassays with fish to test the toxicity of triaryl phosphate. Triaryl phosphate is a high temperature lubricant common to gas compressor stations, and suspected of being present in surface water near the station. Researchers of the Research Council of Alberta, the University of Calgary and the Veterinary Services Division of the Alberta Department of Agriculture in Edmonton conducted chemical and diagnostic tests on dead or debilitated Charolais

cattle in an attempt to isolate the agent or agents causing the observed symptoms. At the time of writing, this case is the subject of court action.

### 2.3.2 AIR POLLUTION

A complaint was placed before the Authority by two farmers who alleged that a serious air pollution problem existed on their property and that paint on their buildings and machinery was corroded by hydrogen sulphide from a nearby oil field battery. Two visits were made to interview the farmers, where evidence of corrosion was found on buildings, machinery and some of the wire fences in the area. Previously farmers in the same area had accepted cash settlements for air pollution caused in the area, but the two farmers in question who also received offers rejected them as being inadequate. The offers were then withdrawn.

The Energy Resources Conservation Board was asked to review the case, and reported to the Authority that levels of hydrogen sulphide and other gaseous effluents were not in excess of permissible amounts. A number of aspen trees had died in the area and a request was made to a specialist with the Canadian Forest Service in Edmonton to investigate. A report was received by the Authority that air pollution was not the agent which had killed the trees which were thought to have suffered frost damage. Data on emissions in the area were also reviewed by the Pollution Control Division of the Alberta Department of the Environment.

The two farmers who entered the complaint were advised that no remedy for their problem appeared to be available through actions of a Government department and they commenced a legal action on their own volition.

Of more diffuse nature, and generally reflecting a strong personal involvement of the complainant, were: withdrawal of water from lakes or streams or injection in oil fields to enhance recovery of oil; drainage of marshes, in order to increase the acreage of land under cultivation;

general complaints about the possibility of exporting water.

### 2.3.3 ENVIRONMENTAL IMPACT OF SURFACE MINING

A substantial number of petitions received by the Authority in March, 1971, came from many parts of Alberta, requesting that the Authority carry out public hearings on the effect on the environment of surface mining.

The petitioners requested that the Authority immediately undertake to study the following:

- [1] The proposed extent of surface mining in the Province of Alberta;
- [2] The ecological effect of such mining operations;
- [3] The steps necessary to mitigate the effects of such operations;
- [4] The controls and regulations that will be necessary to protect the environment;
- [5] The reclamation procedures necessary and the apportionment of costs;
- [6] Areas in Alberta where surface mining operations would be allowed.

This matter was already the subject of investigation, and had been requested by the Premier. The petitions were signed by about 1800 persons and indicated strong support for at least one kind of environmental impact hearing. At this time the Authority had already embarked on studies of environmental impact of resource developments and the positions served to strengthen the need for consideration of impact studies of surface mining in the Province.

### 2.3.4 SUMMARY

In general, the Authority acted on petitions and complaints in four ways: (1) As an information source to the complainants; (2) As a referral agency to assist the complainant reaching the suitable government agency; (3) As an intermediary in order to suggest how a

problem might be solved; (4) If the situation warranted, by the holding of public hearings. When referral of a complaint was made to a Government Department cooperation was excellent. In most cases, both the complainant and the Authority received a satisfactory answer in a short space of time. It is encouraging to note that departments of Government and industry alike showed a good capacity to provide reasonable solutions to problems when acquainted with the facts.

#### 2.4 INFORMATION SERVICES

The Information Services of the Authority serve three basic objectives: (1) to provide the Authority with a research capability in information retrieval for the conduct of its own affairs including public hearings; (2) to serve as a source of public information for its public advisory committees, environmentally concerned individuals and groups and school and university students; (3) to assist other Government agencies and departments with information retrieval when requested.

Initial selection, purchase and organization of a basic collection of environment conservation material reflect the broad environmental interests of the Authority. The level of material is largely non-technical, although access to technical material is provided through the reference collection of material and the library of the Department of the Environment. The types of materials are predominantly periodicals and Government documents, although monographs, legislation, maps, photographs and slides also comprise a significant part of the collection. Liaison is maintained with the library of the Department of the Environment, and cross indexing is used to minimize duplication in acquisitions.

Of the 220 periodicals, 151 are received free of charge. Photographs and slides have been collected largely as a result of field trips, or as gifts from individuals, organizations or other Government agencies and deal generally with visual impacts of environmental alterations. This latter category of material is extremely

useful as illustrative material for school lectures and other public discussions. Monographs have been selected for current impact on the reading public and for technical and philosophical importance in relation to environmental issues most commonly of concern to the public. It is not planned that the present collection will be expanded, but the current periodical list will be maintained. A summary is provided below of the material presently on hand.

A steadily increasing demand is evident for information on environmental problems. Material has been supplied by request to 292 students, 15 teachers and librarians and 32 others for information between May 1, 1971 and November 1, 1971. In addition, daily visits have occurred at the Authority Office in Edmonton, which have resulted in approximately 700 additional public information personal contacts by the Research Information Officer and other Authority staff.

The Research Information Officer prepared an environment conservation sources list, and organized an environmental information forum, held at the Edmonton office of the Authority on October 19, 1971. The forum was attended by 15 representatives of 10 Alberta Government Departments and agencies and 25 representatives of provincial environment and anti-pollution groups. Each of the private organizations and Government agencies presented a summary of its involvement in environmental matters, together with a description of the organization or agency. The forum was thought by the participants to be very useful in making private citizens and public service employees known to each other, and to explore the general objectives of Government workers and citizens in environmental management.

The information centre provides a focus for requests for technical and general information to the public prior to public hearings. Pre-hearing registration of intent to submit material or appear in person and mailing of public hearing information kits and bibliographies is also the responsibility of the Information Center. This is an important function which helps to provide information to the public to help them in the preparation of their briefs.



Public Advisory Committees are important to the Authority and will be discussed more fully in a later section. The effectiveness of public advisory committees bears a direct relationship to the capacity of the information center to generate pertinent information for the Committees. Information kits are prepared for the various committees at the request of the secretariat of the Authority. Preparation of registration and mailing of materials to committee members is carried out by the information center and services over 100 individuals representing organizations, industries, universities.

The information functions represented an important and productive activity of the Authority over the past year.





## PUBLIC HEARINGS



Public hearings by the Authority may be held in response to public petition, by request from the Government or on Authority initiative. The Authority must hold public hearings ".....when required to do so by an order of the Lieutenant Governor-in-Council.....".

The Authority has adopted a procedure for public hearings that attempts to provide as much information as possible to the public before hearings are held. A notice of 60 days is felt to be the minimum time between announcement of a hearing to the public, and actually holding the hearing. Hearings are advertised widely throughout the Province, and the public advisory committees and the organizations represented on them are also used to bring about broadly based participation. During pre-hearing preparations, staff of the Authority assembles information from advisory committees, from Government task forces and from consultants. A prospectus for the hearings is prepared, together with a situation report and background material. This information is sent out as a kit to interested organizations and individuals with an invitation to participate in the hearings. Similar kits are issued to the media representatives at the time of the first public announcement.

A verbatim record is kept of all submissions, questions by the Authority and responses to those questions, and any discussion which takes place. Videotapes have been made of some hearings. A transcript is prepared from the verbatim taped record, and a proceedings is constructed of the detailed, written submissions. A summary report is also prepared, and is made available to the public without charge. The transcript becomes the legal, written record of a hearing, available for public inspection but not publicly distributed. Proceedings are available upon request, at a cost determined by the nature and scope of the hearings.

Finally, the Authority prepares a report and recommendations which are submitted to the Cabinet, through the Minister of the Environment. The report and recommendations are tabled in the Legislative Assembly or released by the Minister. The Authority has then discharged its responsibility under the Act.

### 3.1 COOKING AND HASTINGS LAKES

In the fall of 1970, the Chairman of the Authority received a petition from more than 600 citizens of the Cooking/Hastings Lakes area and surrounding districts requesting that something be done "to save the lakes". The Authority requested the Conservation and Utilization Committee of the Alberta Government to provide information as to the feasibility of water importation from the North Saskatchewan River and other water management measures which could be initiated in a lake restoration program.

A consultant was retained jointly by the Water Resources Division of the Alberta Government and the Authority to prepare a report on the engineering and economic feasibility of a lake restoration and stabilization program. The consultant indicated it was feasible and economically justifiable to import water from the North Saskatchewan River to restore and maintain the lake levels. Other consultants were retained to investigate land use and recreational potential of the Cooking Lake area, and personnel of Government departments provided data of a technical nature as an information base to assist the public in its response to the water restoration proposal.

The Public Hearings on Cooking/Hastings Lakes were well attended, with the result that briefs were received from many citizens and organizations, as well as from city and municipal governments and the Federal Government. With the approval of the Minister and Deputy Minister in each of several Government departments, resource personnel prepared material and submitted it to the public hearings.

Three phases developed during the public hearings on Cooking and Hastings Lakes: phase one was the initial concern by residents with water levels in Cooking and Hastings lakes and their request by petition to save the lakes; phase two involved recognition of the need for a plan of integrated development for the Cooking Lake Moraine as a whole; phase three was the identification of a provincial problem of lake levels, plus an attempt to define the Cooking Lake problems in a Provincial context.

### 3.2 ENVIRONMENTAL IMPACT OF RESOURCE DEVELOPMENT

In February 1971, the Government requested the Authority to hold public hearings on the environmental impact of resource development and this was re-confirmed in November 1971, by the Minister of the Environment, who requested that special urgency be given to surface mining aspects of the hearings. The Authority was requested specifically to "review all present legislation and industry practices relevant to the conservation and reclamation of land that is disturbed as a result of oil, gas, coal and forestry developments". Of particular concern to the Authority in viewing environmental impacts of resource development was the integrity of watershed areas and the prevention of permanent environmental damage. At the request of the Authority, an Advisory Task Group of the Conservation and Utilization Committee was set up to aid the Authority.

The general objective of the Authority was to advise the Lieutenant Governor-in-Council on preventive and reclamation procedures that are sufficiently adequate to assure that such resource developments may be conducted in such a fashion that permanent environmental damage does not result therefrom.

As a second concern, the Government also requested the Authority to investigate the use of pesticides, herbicides and other hard chemicals "which present a threat of serious long term environmental consequences".

Action by the Authority with respect to each of its investigations preparatory to public hearings are outlined below.

#### 3.2.1 SURFACE MINING

Members and staff of the Authority commenced the task of assembling information on surface mining of coal in March 1971. Visits were arranged to most of the major operating mines in Western Canada, with the emphasis on Alberta operations, but including Kaiser Resources in British Columbia. By mid-summer, visits also had been made to mining

operations in Montana, Kentucky and Pennsylvania. A member of the Authority was able to spend some time in the Ruhr Valley of West Germany without cost to the Authority.

In July 1971, a consultant was retained to investigate the Alberta coal mining industry and to prepare a situation statement as the basis for public information at the projected hearings planned for the fall or winter of 1971. During this time also, the Authority met with members of a Task Force of the Conservation and Utilization Committee, with respect to an outline of proposed reclamation legislation, also to be made available for public discussion at the public hearings.

The Authority had been requested by the Minister of the Environment to urgently move forward its public hearings concerning surface mining for coal in Alberta. The Minister also directed the Authority to place emphasis on the requirements for reclamation legislation. The Minister wished the Authority to hold the hearings before the end of 1971 in order that the Government could have an indication of public response in respect of surface reclamation prior to the Spring Session of the Legislature.

The dates and places for the public hearings on surface mining were announced on November 16, 1971. Efforts were made to publicize the hearings widely through the cooperation of the press, radio and television stations and by paid advertising in Alberta newspapers. Organizations, individuals and the coal industry were contacted and invited to make submissions at the hearings scheduled for December 13, 15, 17 and 22, 1971 in Grande Prairie, Lethbridge, Edmonton and Calgary, respectively. Verbatim transcripts, proceedings embodying written submissions and a summary of the proceedings will be printed by the Authority, as public documents apart from its own recommendations to the Lieutenant Governor-in-Council.

### 3.2.2 OIL AND GAS EXPLORATION AND DEVELOPMENT

Within the framework of studies of the impact on the environment of resource development, a consultant was commissioned to assemble

background information on the oil and gas industry in Alberta. The consultant was instructed to assemble data which would enable the Authority to prepare a situation statement leading to public hearings on the environmental impacts of the oil and gas industry operations in the Province.

The impact studies, plus other preparatory work on the oil and gas industry leading to public hearings are still in progress. Included in the preparation of the situation statement is the identification of problems associated with pipeline routings, geophysical activities, roads associated with exploration, effects on biological resources (timber, wildlife, fish, agriculture), erosion, oil spills and allied effects. A review is also being made of the legislation applicable to environmental protection, as well as the mechanisms employed by various Government agencies to effect environmental control and reclamation of damaged areas.

As indicated earlier, assembly of data and preparation of reports by the consultant and Authority staff will culminate in publication of a situation statement and Prospectus which will enable the public to identify environmental concerns and to submit these at public hearings, tentatively scheduled for 1973.

### 3.2.3 FOREST INDUSTRY

A third major area of environmental impact involves the forest products industry. A consultant was commissioned to develop a situation report in order to provide a broad overview of the forest products industry in a similar context as that developed for surface mining and the oil and gas industry.

Preparation of background material on the forest industry as a prelude to public hearings involves identification of possible environmental disturbances associated with timber and pulpwood extraction, haulage, processing and the interrelationships of these factors with other forest land uses.

Preparation of material concerned with forest utilization is



still in progress and will not be finalized until a firm date is established for the public hearing, tentatively scheduled for the autumn of 1972.

#### 3.2.4 PESTICIDES, HERBICIDES AND HARD CHEMICALS

Authority members and staff have held initial discussions on pesticides, herbicides and hard chemicals with Government officials and members of the Alberta Interdepartmental Committee on Pesticides, as well as with the Science Advisory Committee to the Authority. Some preliminary information also has been obtained by the Authority Research Information Officer. Data gathering and the possibility of holding technical sessions as a means of providing a situation statement for public hearings have occupied the Authority. Following the proposed technical sessions, public hearings on the subject of pesticides, herbicides and hard chemicals are projected for 1973.

#### 3.2.5 OTHER PUBLIC HEARINGS

The Minister of the Environment has requested the Authority to schedule other public hearings, projected to be held roughly within a year. The topics of additional public hearings and dates tentatively selected by the Authority are as follows:

<u>Subject</u>	<u>Tentative Dates</u>
Environmental Effects of the Operation of Sulfur Extraction Gas Plants	August 1972
Land Use and Development Within the Canmore Corridor	November 1972
Reclamation and Development in the Crows Nest Pass Area	January 1973
Regulated Development in the Strathcona Industrial Corridor	March 1973



## PUBLIC ADVISORY COMMITTEES



#### 4.1 PUBLIC ADVISORY COMMITTEE ON THE ENVIRONMENT

The Public Advisory Committee on the Environment draws its membership from a wide variety of Alberta-based public organizations. The list of organizations and the members nominated by them appear in Appendix 2(a). Other organizations may be added in the future, in order that the broadest form of representation is achieved.

##### 4.1.1 FIRST ANNUAL CONFERENCE

A small group of nominees was selected to act as an organizing committee whose main task was the organization of the first fall conference of the committee, which was held in Edmonton in November 1971. The conference program included the structuring of the Public Advisory Committee, the study group sessions, and reports of other committees, namely, the Advisory Committee on the Conservation of Historical and Archaeological Resources, the Advisory Committee on Environmental Education, and the Science Advisory Committee. The organizing committee and the Conference were assisted by resource persons who were members of the public service representing a number of government departments.

During the early stages of the Conference the Committee decided to sub-divide into five study groups as follows: structure and direction of the Public Advisory Committee on the Environment, non-renewable resources, renewable resources, pollution and environmental protection. Their reports to the plenary sessions expressed an interest in a wide variety of topics within each study area and as a result sub-committees were established in some of the study groups. Some of the current topics of concern to the Committee are as follows:

- Review of Current Environmental Legislation and Regulations;
- Consideration of Economic Bases of Resource Development;
- Depletion of Energy Resources;
- Improvement of Information and Education Services Related to Environmental Issues;
- Conflicts in Land Allocation and Use;
- Urban Planning (Planning to Minimize Pollution in a Cold Climate);

Population Growth and Growth in Per Capita Consumption;  
Resource Management Practices;  
Re-utilization of Wastes;  
Pollutants Entering Watercourses;  
Protection of Wildlife Habitat;  
Watershed Management;

The Committee ratified a coordinating committee structure which is made up of the Chairmen of the study group sessions and the Chairmen of the sub-committees. Their major task is to co-ordinate the work of the total committee and provide for an effective communication link between the Authority and the Committee as a whole.

#### 4.1.1.1 Recommendations of the Conference

The Conference also considered matters which it felt needed attention and passed the following resolutions: (1) The Authority review those sections of the Wildlife Act which are pertinent to non-resident hunters, with a view to setting higher minimum and maximum penalties; (2) The Co-ordinating Committee call a meeting at an early date to plan a program of suitable activities leading up to the Man and Resources Conference scheduled for 1973; (3) The Membership Committee or the Co-ordinating Committee develop a mechanism whereby interested high school students could participate in the activities of the Public Advisory Committee on the Environment; (4) The Department of the Environment Information Branch be designated the central depository and information dispersing centre for the multiplicity of organizations which are now providing information on pollution.

Each of the study groups has commenced the task of defining specific topics, upon which recommendations will be made, and it is anticipated that reports from the study groups will be summarized and included in future annual reports of the Authority.

#### 4.2 PUBLIC ADVISORY COMMITTEE ON CONSERVATION OF HISTORICAL AND ARCHAEOLOGICAL RESOURCES

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On June 21, 1971, in response to a submission sent to the Government of Alberta, the Authority established a Public Advisory Committee on the Conservation of Historical and Archaeological Resources. The Committee has been at work to provide recommendations to the Authority with regard to public hearings and to draft suggestions for legislation. At an appropriate time the public may be invited to present briefs on the subject, from which it is hoped that advice would be forthcoming to enable these resources to be preserved for the benefit of all Albertans. The complexity of the issue, because of the vested interests of the public, government and private institutions will require that careful thought be given to the impact of any proposed legislation. Membership in the Committee is listed in Appendix 2(b).

#### 4.3 PUBLIC ADVISORY COMMITTEE ON ENVIRONMENTAL SCIENCES

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In order to explore the possibility of obtaining assistance and advice from a Science Advisory Committee, the Authority discussed the matter with scientists from the Universities at Edmonton, Calgary and Lethbridge, as well as with scientists from industry and the Research Council of Alberta.

The first meeting of an Interim Advisory Committee on Environmental Sciences, was held at the University of Calgary on November 19, 1971, to propose objectives of the Committee for the future. Following the Calgary meeting, the Interim Committee agreed to present a brief statement on the formation of the Public Advisory Committee on Environmental Sciences to the Public Advisory Committee on the Environment at its annual conference. Such a statement was publicly presented at the conference on November 26, 1971.

The Committee has yet to define its objectives in detail, but the intent is to examine fundamental scientific, technical, economic or social questions affecting environmental matters. These topics may

be originated by deliberations within the Committee or may be referred to the Committee by the Environment Conservation Authority.

Interim membership in the Public Advisory Committee on Environmental Sciences is listed in Appendix 2(c).

#### 4.4 PUBLIC ADVISORY COMMITTEE ON ENVIRONMENTAL EDUCATION

In common with the Public Advisory Committee on Environmental Sciences, the Advisory Committee on Environmental Education is only in the formative stage of its existence. Committee objectives remain to be fully defined, and representation will be increased as the Committee develops.

The Committee was able to develop an initial position paper, which it made public at the annual conference of the Public Advisory Committee on the Environment. Broadly speaking the Advisory Committee on Environmental Education has defined a need for increased emphasis on environmental education in the Alberta Education system at all levels. The Committee also has suggested that teacher training programs are needed to assist in the further development of environmental education and that existing programs could absorb this new emphasis without substantial curricula changes. The Committee has also stated that environmental education should continue to emphasize current public issues in order to increase the interest of students and their own personal involvement in a well informed way.

Membership of the Public Advisory Committee on Environmental Education is listed in Appendix 2(d).





## ORGANIZATION AND STAFF



## 5.1 ORGANIZATION

The Environment Conservation Authority is established as a corporation under Section 4 of the Environment Conservation Act. It consists of a Chairman, Vice-Chairman and a third Member. The Chairman was appointed October 1, 1970 and the Vice-Chairman and third Member, January 1, 1971. Appointments of Authority employees are made under Section 6 of the Environment Conservation Act. A Secretary to the Authority was appointed March 1, 1971 and an Information/Research Officer on May 1, 1971. A Project Coordinator and supporting office staff were appointed on June 1, 1971. Other staff has been appointed as required on short term agreement from time to time.

## 5.2 AUTHORITY MEMBERS AND STAFF

Walter R. Trost	Chairman
Paul Babey	Vice-Chairman
Stuart B. Smith	Member
Milt G. Pahl	Secretary to the Authority [Resigned Nov. 15, 1971]
William A. Flook	Project Coordinator
Beverly Chandler	Research/Information Officer
Thomas A. Sadler	Research/Information Officer [Calgary]
Jean S. McCoy	
Rita A. Bougie	
Sharon E. Skorjanc	
Sonia R. Thomson	
Regan L. Speers	

### 5.3 EDMONTON OFFICE

Space was originally provided in Edmonton for the Chairman and a secretary in the Legislative Building. In November 1970, additional space was secured in the Devonian Building prior to appointment of the Vice-Chairman and third Member. In July, 1971 the Authority moved its offices to its present location at 9912 - 107 Street, Edmonton, Alberta.

### 5.4 CALGARY OFFICE

The Authority anticipated the need for public contact in southern Alberta by securing space in the J.J. Bowlen Building early in 1971. The office became active in July 1971 with the appointment of Thomas S. Sadler as Information/Research Officer.

From the Calgary office investigations of environmental problems in southern Alberta were carried out. The office handled citizen and student requests for environmental information and information on projected public hearings by the Authority was also made available to the public.

The Calgary office was used by Authority members and staff to meet with representatives of citizen groups, or individuals, as well as for meetings of Public Advisory Committee members.



## FISCAL OPERATIONS



6.1 LETTER FROM PROVINCIAL AUDITOR

GOVERNMENT OF THE PROVINCE OF ALBERTA

Office of the Provincial Auditor

Edmonton, March 17, 1972

Chairman  
Environment Conservation Authority  
EDMONTON, Alberta

Under the provisions of Section 8, Chapter 125, R.S.A. 1970, The Environment Conservation Act as amended, I have audited the records of the Environment Conservation Authority for the fourteen months ended November 30, 1971.

The Authority received no revenues during the period under review and all expenditures were made from funds provided by the Legislature.

In my opinion, the attached Statement of Operations presents fairly the transactions of the Environment Conservation Authority for the fourteen months ended November 30, 1971.

F. C. A.  
Provincial Auditor.

Original signed by: C. K. Huckvale



6.1.1 AUDITOR'S STATEMENT

ENVIRONMENT CONSERVATION AUTHORITY

STATEMENT OF OPERATIONS

FOR THE FOURTEEN MONTHS ENDED NOVEMBER 30, 1971

Contributions by the Province of Alberta \$198,517.49

Expenditure:

Salaries	\$99,289.74	
Fees and commissions	23,189.59	
Travelling:		
Staff	\$14,865.58	
Other	<u>5,065.43</u>	
		19,931.01
Wages		10,500.04
Equipment purchases		9,034.69
Materials and supplies		5,760.39
Printing, stationery, office supplies and postage		5,344.43
Library		4,814.68
Advertising		4,665.15
Equipment rental		3,497.52
Telephone and telegraph		1,921.51
Staff relocation		1,266.50
Insurance		80.00
Unemployment Insurance		77.63
Canada Pension Plan		<u>72.90</u>
		189,445.78

Excess of contributions over expenditure \$ 9,071.71

Accounted for as follows:

Cash in bank	\$18,332.64	
Less: Unpaid accounts	<u>9,260.93</u>	
		\$ <u><u>9,071.71</u></u>

The undernoted expenditure by the Department of  
Public Works on behalf of the Authority is  
not reflected in the statement:

Furniture and equipment	\$23,303.65
Office rent	<u>16,965.38</u>
	<u><u>\$40,269.03</u></u>



## APPENDICES





7.1

APPENDIX 1

THE ENVIRONMENT CONSERVATION ACT, 1970

being chapter 36 of the Statutes of Alberta, 1970,  
with amendments up to April 1, 1971.

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Office Compilation

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Prepared by the Environment Conservation Authority,  
May 11, 1971

N O T E

All persons making use of this compilation are reminded that it has no legislative sanction; that the amendments have been embodied only for the convenience of reference, and that the original Acts should be consulted for all purposes of interpreting and applying the law.

THE ENVIRONMENT CONSERVATION ACT, 1970

CHAPTER 36

An Act Respecting Environment Conservation

(Assented to April 15, 1970)

- |                          |  |
|--------------------------|--|
| Short title              | 1. This Act may be cited as <i>The Environment Conservation Act</i> .  |
| Definitions              | 2. In this Act, <ul style="list-style-type: none"><li>(a) "Authority" means the Environment Conservation Authority established under this Act;</li><li>(b) Repealed. (1971, c. 32, s. 18)</li><li>(c) "government agency" means<ul style="list-style-type: none"><li>(i) a corporation that is an agent of the Crown in right of Alberta, or</li><li>(ii) any corporation, commission, board or other body empowered to exercise quasi-judicial or governmental functions and whose members are appointed by an Act of the Legislature, the Lieutenant Governor in Council, or a Minister of the Crown, or any combination thereof;</li></ul></li><li>(d) "natural resources" means land, plant life, animal life, water and air;</li><li>(e) "public advisory committee" means a public committee on environment conservation appointed by the Lieutenant Governor in Council under this Act.</li></ul> |
| Environment conservation | 3. For the purposes of this Act, the following are matters pertaining to environment conservation:   |



ENVIRONMENT CONSERVATION ACT

- (a) the conservation, management and utilization of natural resources;
- (b) the prevention and control of pollution of natural resources;
- (c) the control of noise levels resulting from commercial or industrial operations in so far as they affect the environment in the vicinity of those operations;
- (d) economic factors that directly or indirectly affect the ability of persons to carry out measures that relate to the matters referred to in clauses (a), (b) and (c);
- (e) any operations or activities, whether carried on for commercial or industrial purposes or otherwise
  - (i) that adversely affect or are likely to adversely affect the quality or quantity of any natural resource, or
  - (ii) that destroy, disturb, pollute, alter or make use of a natural resource or are likely to do so;
- (f) the preservation of natural resources for their aesthetic value;
- (g) laws in force in Alberta that relate to or directly or indirectly affect natural resources.

Environment  
Conservation  
Authority

4. (1) There is hereby established a corporation called the "Environment Conservation Authority" consisting of three members appointed by the Lieutenant Governor in Council.

(2) The Lieutenant Governor in Council shall designate one of the members of the Authority as chairman and another as vice-chairman.

(3) The vice-chairman is the acting chairman of the Authority in the event of the absence or inability to act of the chairman or in the event that the office of chairman is vacant.

(4) Members of the Authority

- (a) shall be paid salaries in accordance with a schedule of salary rates prescribed by the Lieutenant Governor in Council, and

ENVIRONMENT CONSERVATION ACT

- (b) shall be paid their reasonable travelling and living expenses while absent from their ordinary places of residence and in the course of their duties as members of the Authority, at rates prescribed by the Lieutenant Governor in Council.

(5) *The Public Service Pension Act* applies to the members of the Authority.

Meetings

5. (1) The Authority shall meet at the call of the chairman.
- (2) Two members of the Authority constitute a quorum.
- (3) The Authority may make rules respecting the calling of meetings of the Authority and the conduct of business thereat, and generally as to the conduct of the business and affairs of the Authority.

Employees

6. In accordance with *The Public Service Act* there may be appointed a secretary and any other employees as may be required for the purpose of providing clerical and secretarial services to the Authority.

Functions  
of  
Authority

7. (1) The Authority
- (a) shall conduct a continuing review of policies and programs of the Government and government agencies on matters pertaining to environment conservation and shall report thereon to the Lieutenant Governor in Council;
  - (b) may inquire into any matter pertaining to environment conservation and make its recommendations and report thereon to the Lieutenant Governor in Council;
  - (c) shall, when required to do so by an order of the Lieutenant Governor in Council, inquire into any matter pertaining to environment conservation that is specified in the order and make its recommendations and report thereon to the Lieutenant Governor in Council;
  - (d) may require any officers or employees of any department of the Government or any government agency to provide information that, in the opinion of the Authority, is necessary for the purposes of enabling it to carry out its responsibilities;

ENVIRONMENT CONSERVATION ACT

- (e) may, and when required to do so by an order of the Lieutenant Governor in Council shall, hold public hearings for the purpose of receiving briefs and submissions on any matter pertaining to environment conservation, and shall report thereon to the Lieutenant Governor in Council;
- (f) may from time to time as it considers necessary, but at least once a year, hold joint meetings with the public advisory committees;
- (g) may refer any matter pertaining to environment conservation to the Department of the Environment for its recommendations and report thereon;
- (h) may engage the services of persons having special technical or other knowledge in connection with an inquiry of any matter pertaining to environment conservation that the Authority has undertaken or proposes to undertake;
- (i) in co-operation with and primarily through the medium of the Department of the Environment shall use its best efforts to achieve co-ordination of policies, programs and administrative procedures of the Government and government agencies relating to matters pertaining to environment conservation;
- (j) shall make a report in each year to the Lieutenant Governor in Council
  - (i) summarizing generally its activities and affairs in the preceding year,
  - (ii) summarizing the recommendations made by it to the Lieutenant Governor in Council and to the Department of the Environment the preceding year, and
  - (iii) showing any reports or studies prepared in the preceding year at the request of the Lieutenant Governor in Council.

(2) When a report by the Authority under subsection (1), clause (j) is received by the Lieutenant Governor in Council, the President of the Executive Council shall lay a copy of it before the Legislative Assembly if it is then in session and if not, within 15 days after the commencement of the first session in the next ensuing year.

ENVIRONMENT CONSERVATION ACT

8. (1) The Authority may make such banking arrangements as are necessary for the carrying out of its duties and functions.

(2) The fiscal year of the Authority is the period from April 1st to the next succeeding March 31st.

(3) The Authority is in respect of its accounts and financial transactions subject to audit by the Provincial Auditor from time to time and at least once every year.

(4) The Provincial Treasurer shall pay to the Authority the moneys appropriated by the Legislature for the purposes of the Authority (except the moneys appropriated for the salaries payable to the members and employees of the Authority) in equal monthly instalments unless otherwise agreed between the Authority and the Provincial Treasurer.

(5) Subsistence and travelling allowances payable to the employees of the Authority under the regulations under The Public Service Act shall be paid by the Authority from its funds.

9. Repealed. (1971, c. 32, s. 18)

10. Repealed. (1971, c. 32, s. 18)

Public  
advisory  
committees

11. The Authority may

- (a) appoint one or more public advisory committees on environment conservation, and
- (b) prescribe the duties and functions of a public advisory committee.
- (c) repealed. (1971, c. 32, s. 18)

Regulations

12. The Lieutenant Governor in Council may make regulations

- (a) providing for any procedure or matter for the purpose of facilitating the functions of the Authority, or a public advisory committee and the relations between them,

## ENVIRONMENT CONSERVATION ACT

- (a) prescribing the rates of remuneration to be paid to members of a public advisory committee for their travelling and living expenses incurred in the course of their duties as members of a committee, and
- (b) providing for any other matter considered necessary to carry out the purposes of this Act.

### PERTINENT SECTIONS OF ACTS OF THE STATUTES OF ALBERTA WHICH REFER TO THE ENVIRONMENT CONSERVATION AUTHORITY

#### THE CLEAN WATER ACT, 1971

##### CHAPTER 17

erral to  
ronment  
ervation  
ority

7. (8) Where an appeal is made under subsection (7), the Minister shall refer the appeal and the stop order to the Authority for an inquiry.

(9) The Authority shall

- (a) hold a hearing to inquire into all matters leading to the making of the stop order, and
- (b) determine whether, in its opinion, there were sufficient grounds for the making of the stop order,

and upon completion of the enquiry the Authority shall report its findings to the Minister together with any recommendations it wishes to make in regard to the confirmation, amendment or revocation of the stop order.

(10) Upon receipt of the report of the Authority the Minister shall either confirm, amend or revoke the stop order and shall notify accordingly the person to whom it is directed.

(11) The Minister may

- (a) amend a stop order if he considers it advisable in the circumstances to do so, or
- (b) revoke a stop order,

and shall notify accordingly the person to whom the stop order was directed.

## ENVIRONMENT CONSERVATION ACT

(12) This section applies whether or not the contravention of the Act, regulation or order concerned constitutes an offence, and whether or not a conviction has been adjudged for the offence.

## THE CLEAN AIR ACT, 1971

### CHAPTER 16

Stop  
Orders

7. (8) Where an appeal is made under subsection (7), the Minister shall refer the appeal and the stop order to the Authority for an inquiry.

(9) The Authority shall

- (a) hold a hearing to inquire into all matters leading to the making of the stop order, and
- (b) determine whether, in its opinion, there were sufficient grounds for the making of the stop order,

and upon completion of the inquiry the Authority shall report its findings to the Minister together with any recommendations it wishes to make in regard to the confirmation, amendment or revocation of the stop order.

(10) Upon receipt of the report of the Authority the Minister shall either confirm, amend or revoke the stop order and shall notify accordingly the person to whom it is directed.

(11) The Minister may

- (a) amend a stop order if he considers it advisable in the circumstances to do so, or
- (b) revoke a stop order,

and shall accordingly notify the person to whom the stop order was directed.

(12) This section applies whether or not the contravention of the Act, regulation or order concerned constitutes an offence, and whether or not a conviction has been adjudged for the offence.

ENVIRONMENT CONSERVATION AUTHORITY

THE DEPARTMENT of the ENVIRONMENT ACT, 1971

CHAPTER 24

referral to  
Environment  
Conservation  
Authority

16. (8) Where an appeal is made under subsection (7), the Minister shall refer the appeal and the stop order to the Authority for an inquiry.

(9) The Authority shall

- (a) hold a hearing to inquire into all matters leading to the making of the stop order, and
- (b) determine whether, in its opinion, there were sufficient grounds for the making of the stop order,

and upon completion of the inquiry the Authority shall report its findings to the Minister together with any recommendations it wishes to make in regard to the confirmation, amendment or revocation of the stop order.

(10) Upon receipt of the report of the Authority the Minister shall either confirm, amend or revoke the stop order and shall notify accordingly the person to whom it is directed.

THE WILDERNESS AREAS ACT, 1971

CHAPTER 114

referral to  
Environment  
Conservation  
Authority

4. The Environment Conservation Authority when requested by the Lieutenant Governor in Council shall hold public hearings for the purpose of receiving and hearing submissions and representations respecting

- (a) any recommendations made by the Advisory Committee under Section 2, subsection (7) or the report of the Advisory Committee under Section 3, subsection (2), or
- (b) any proposal made by the Executive Council for the establishment of a new wilderness area or the addition of any lands to, or the withdrawal of any lands from, an existing wilderness area, or
- (c) any other matters pertaining to the administration and management of wilderness areas:



7.2

APPENDIX 2(a)  
PUBLIC ADVISORY COMMITTEE  
ON  
THE ENVIRONMENT

MEMBERS

NOMINATING ORGANIZATION

Mr. G. Aalborg	Wild Kakwa
Mr. C. E. Anderson	Unifarm
Mayor A.C. Anderson	City of Lethbridge
Mr. R.C. Bacon	City of Grande Prairie
Mr. J.E. Baugh	The Canadian Chamber of Commerce
Mr. B. Benson	Alberta Chamber of Commerce
Dr. A.L. Bryan	Archaeological Society of Alberta
Mr. G. Cameron	Edmonton Chamber of Commerce
Mr. T. Chambers	M.L.A. Progressive Conservative Party
Mr. J.C. Coe	National & Provincial Parks Association of Canada (Calgary Chapter)
Ms. C.G. Davidson	Consumers' Association of Canada
Mr. S. Fritter	Alberta Federation of Labour
Mr. J.G. Gainer	Canadian Petroleum Association
Mayor R. Biggon	Alberta Urban Municipalities Association
Mr. J.Y. Gouin	Alberta Roadbuilders Association
Mr. J. Gregory	Research Council of Alberta.
Dr. H. Habgood	The Alpine Club of Canada
Mr. H.M. Hayward	The Canadian Manufacturer's Association
Mr. L. Henderson	Unifarm
Dr. J.M. Howell	Alberta Medical Association
Mr. E. T. Jones	Alberta Wildlife Foundation
Ms. Linda Jones	Calgary Eco-Centre Society
Mr. F.C. Jorgenson	Southern Alberta Institute of Technology
Dr. J.P. Kelsall	The Canadian Society of Wildlife & Fishery Biologists (Alberta Chapter)
Mr. H. Krusche	The Chemical Institute of Canada
Mr. A. Lampitt	Alberta Teacher's Association
Mr. N.A. Lawrence	Association of Professional Engineers, Geologists & Geophysicists of Alberta

MEMBERS

Dr. A. Laycock  
Dr. P.D. Lewis  
Mr. R. T. Marshall  
Mr. R.E. McAllister  
Dr. B.C. McInnis  
Mr. J. McIntosh  
Mr. G.H. McNabb  
Alderman D.B. Menzies  
Mr. T.C. Noble  
Mr. T. O'Keefe  
Mr. G. Peel  
Dean W.T. Perks  
Dr. W.E. Phillips  
  
Mr. K. Puffer  
Dr. R.W. Reid  
Mr. C.N. Reimer  
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Dr. G. Rostoker  
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Mr. D.A.E. Spalding  
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Mr. D. Wighton  
Mr. A. Wigmore  
  
Mr. L. Williams  
Ms. P. Wishart  
Mr. R. Zander

NOMINATING ORGANIZATION

Alberta Geographical Society  
Pollution Control - Southern Alberta  
The Coal Association of Canada  
Alberta Institute of Agrologists  
University of Lethbridge  
The Alberta Association of Architects  
Alberta Wilderness Association  
City of Edmonton  
Alberta Irrigation Projects Association  
City of Calgary  
Alberta Fish & Game Association  
The University of Calgary  
National & Provincial Parks Association  
of Canada (Edmonton Chapter)  
Northern Alberta Institute of Technology  
Canadian Institute of Forestry  
Alberta Federation of Labour  
The Canadian Manufacturer's Association  
The University of Alberta  
Alberta Forest Products Association  
Alberta Motor Association  
City of Red Deer  
The University of Alberta  
City of Medicine Hat  
Federation of Alberta Naturalists  
The Alberta Junior Chamber of Commerce  
Indian Association of Alberta  
The University of Calgary  
Edmonton Anti-Pollution Group and STOP  
Alberta Association of Municipal  
Districts and Counties  
Alberta School Trustees Association  
University Women's Club of Edmonton  
M.L.A. Progressive Conservative Party.

APPENDIX 2(b)

PUBLIC ADVISORY COMMITTEE  
ON THE CONSERVATION OF  
ARCHAEOLOGICAL & HISTORICAL RESOURCES

Dr. L. A. Bayrock	Research Council of Alberta
Dr. A. L. Bryan	University of Alberta
Mr. H. A. Dempsey	The Glenbow Foundation
Mr. A. W. Farmilo	Supertest Investments & Petroleum Ltd.
Dr. R. G. Forbis	Canadian Archaeological Association
Mr. R. O. Harrison	Provincial Museum & Archives of Alberta
Mr. A. Johnston	Canada Dept. of Agriculture - Research Station
Mr. J. G. MacGregor	Author - Historian
Chief J. Snow	Alberta Indian Association

APPENDIX 2(c)

PUBLIC ADVISORY COMMITTEE

ON

ENVIRONMENTAL SCIENCES

<u>NAME</u>	<u>AFFILIATION</u>
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Dr. D. A. Boag	University of Calgary
Dr. J. J. Bond	University of Alberta
Dr. H. A. Buckmaster	University of Calgary
Dr. E. E. Daniel	University of Alberta
Dr. D. D. Detomasi	University of Calgary
Professor P.M. Dranchuk	University of Alberta
Dr. J. E. Harrison	University of Calgary
Dr. S. M. Herrero	University of Calgary
Dr. R. Kellerhals	University of Alberta
Dr. J. Kuijt	University of Lethbridge
Professor D.R. Percy	University of Alberta
Dr. R. P. Pharis	University of Calgary
Dr. P. J. Smith	University of Alberta
Dr. L. L. Stebbins	University of Lethbridge
Dr. E. H. Wiggins	Research Council of Alberta

APPENDIX 2(d)

PUBLIC ADVISORY COMMITTEE

ON

ENVIRONMENTAL EDUCATION

NAME

AFFILIATION

Dr. R. Bosetti	Alberta Colleges Commission
Dr. A. Griffiths	Alberta School Trustees Association
Mr. A. K. Harrison	Alberta Teachers Association
Dr. I. Hastings	Alberta Dept. of Education
Dr. K. Kamra	Northern Alberta Institute of Technology
Mr. C. N. Reed	Southern Alberta Institute of Technology
Mr. D.A.E. Spalding	Provincial Museum & Archives of Alberta







